



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,712	03/22/2004	Werner Krude	GKING 1189 PUS	9247

7590 01/11/2005

Robert P. Renke  
Suite 250  
28333 Telegraph Road  
Southfield, MI 48034

EXAMINER
----------

BINDA, GREGORY JOHN

ART UNIT	PAPER NUMBER
3679	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/805,712

Applicant(s)

WERNER KRUDE

Examiner

Greg Binda

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) 16,20 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-15,17-19,21,22 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/011,806.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20040322.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

*Election/Restrictions*

1. Applicant's election without traverse of Species IV shown in Figs. 10 & 11 in the reply filed on November 29, 2004 is acknowledged.
2. Claims 16, 20 & 23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 29, 2004.

*Specification*

3. The amended abstract of the disclosure is objected to because in line 2 the word "having" should be changed to "has" and in line 3 the word "and" should be inserted prior to "torque".
4. The disclosure is objected to because:
  - a. Paragraphs 0016, 0029, 0030 the "detail X" should be changed to "detail 4" in order to agree with the drawings.
  - b. Paragraph 0019, 0034, 0035 "detail X" should be changed to "detail 7" in order to agree with the drawings.
  - c. Paragraph 0021, 0037, 0038 "detail X" should be changed to "detail 9" in order to agree with the drawings.
  - d. Paragraph 0023, 0040, 0041 "detail X" should be changed to "detail 11" in order to agree with the drawings.
  - e. Page 13, line 9, the reference character "25<sub>3</sub>" should be changed to "25<sub>10</sub>".

Art Unit: 3679

f. Page 13, line 11 describes Fig. 12 as “a simplified illustration” but does not state by what standard it is simplified. In other words it fails to identify the device that is shown as simplified in Fig. 12.

5. The detailed description in the specification is objected to as failing to comply with 37 CFR 1.71 and 1.75(d)(1) because the detailed description of the elected species fails to provide proper antecedent basis for the following claimed subject matter:

- a. Claim 13, line 7 and claim 19, line 6: “an angle bisecting plane”
- b. Claim 13, lines 14-21, 23 & 24 and claim 19, lines 14-21, 23 & 24: all limitations therein
- c. Claims 14, 18 & 24: all limitations therein

*Claim Rejections - 35 USC § 112*

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 13-15, 17-19, 21, 22 & 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 13, line 23 and claim 19, line 23 recite the limitation, “axial stopping positions”. Its not clear where these multiple “axial stopping positions” occur since only one is described (see page 13, line 6).

Art Unit: 3679

- b. Claim 22 recites the limitation "an inner face". It is not clear if this inner face is the same as, or different from the inner face recited in claim 19, line 23.

*Claim Rejections - 35 USC § 103*

8. Claims 13, 14, 17, 19 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krude et al, US 5,451,185 (Krude) in view of Miller, US 2,875,600 and Jacob, US 5,242,329. In Figs. 9 & 10, Krude shows a constant velocity joint comprising: an outer joint part 41 with outer tracks 45; an inner joint part 49 (see also col. 5, line 48) with inner tracks 50; torque transmitting balls 53 which are received in pairs of tracks comprising the outer tracks and inner tracks which are curved outwardly with reference to a longitudinal axis; and a ball cage 48 with cage windows 54 in which the balls are held in a common plane. Fig. 10 shows that an inner face 46 of the outer joint part is cylindrical (see also col. 5, line 67) and that the outer face 48 of the ball cage 47 has radial play relative to an inner edge of the outer joint part. Fig. 10 shows that the inner face of the cage 47 is cylindrical (see the left side of the cage).

- a. Krude does not show alternating pairs of tracks opening in opposite directions (i.e. arranged as in a common counter track joint). However, Miller teaches (see particularly col. 2, lines 17-33) that in a constant velocity joint the alternating pairs of tracks should be made so that they open in opposite directions in order to provide a means for eliminating resultant end thrust in the joint. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the constant velocity ball joint of Krude by making the alternating pairs of tracks open in

Art Unit: 3679

opposite directions in order to provide a means for eliminating resultant end thrust as taught by Miller.

b. Krude and Miller do not expressly disclose control angles that are not less than 8 degrees. However, Jacob teaches in col. 1, line 59 through col. 2, line 5 making a constant velocity ball joint so that its control angles are not less than 8 degrees in order to provide a joint which exhibits stable guiding conditions over the entire range of articulation angles. Therefore it would have been obvious to one of ordinary skill in the art to modify the combination of Krude and Miller by making the joint so that the control angles are not less than 8 degrees in order to provide a joint which exhibits stable guiding conditions over the entire range of articulation angles as taught by Jacob.

#### *Allowable Subject Matter*

9. Claims 15, 18, 21 & 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can normally be reached on M-F 9:30 am to 7:00 pm with alternate Fridays off.

Art Unit: 3679

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Greg Binda  
Primary Examiner  
Art Unit 3679